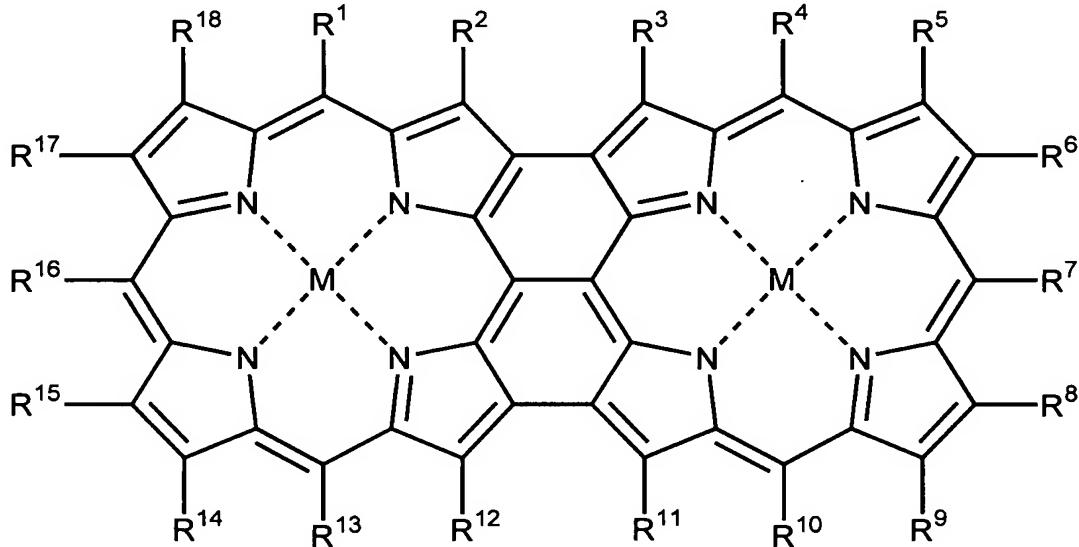


comprising:

a semiconductor layer on which a sensitizing dye having an acidic group-containing porphyrin polymer expressed by a below-described general formula (2) as a skeleton of a base is carried; and

an electrolyte layer between counter electrodes; wherein:  
general formula (2) is:



and wherein:

R<sup>1</sup> to R<sup>18</sup> indicate hydrogen atoms or arbitrary substituents and may be the same or different;

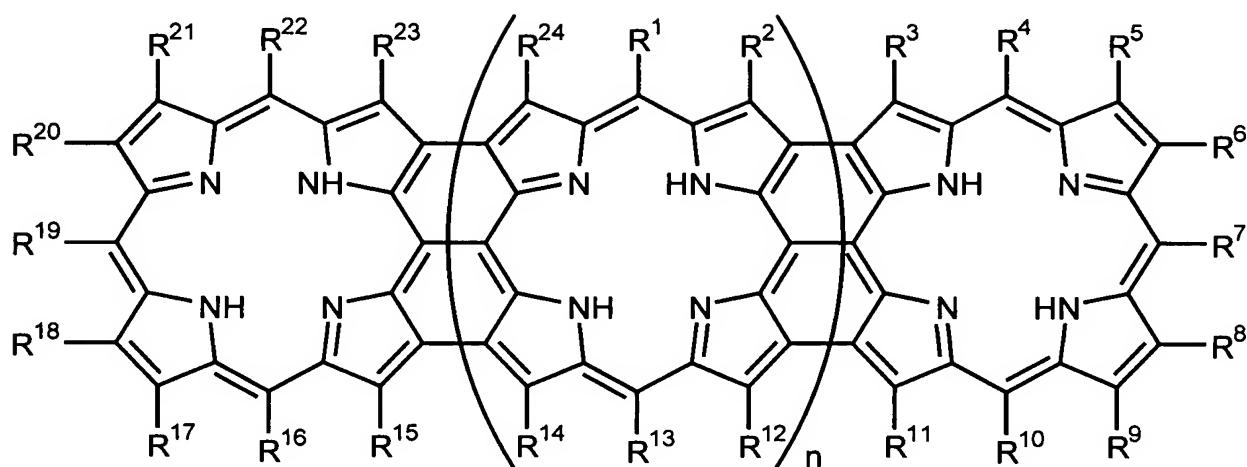
at least one of R<sup>1</sup> to R<sup>18</sup> is an acidic substituent; and

M indicates a group of arbitrary kinds of metals.

3. (Previously presented) A dye-sensitized type photoelectric conversion device comprising:

a semiconductor layer on which a sensitizing dye having an acidic group-containing porphyrin polymer expressed by a below-described general formula (3) as a skeleton of a base is carried; and

an electrolyte layer between counter electrodes; wherein:  
general formula (3) is:



and wherein:

R<sup>1</sup> to R<sup>24</sup> indicate hydrogen atoms or arbitrary substituents and may be the same or different;

at least one of R<sup>1</sup> to R<sup>24</sup> is an acidic substituent; and

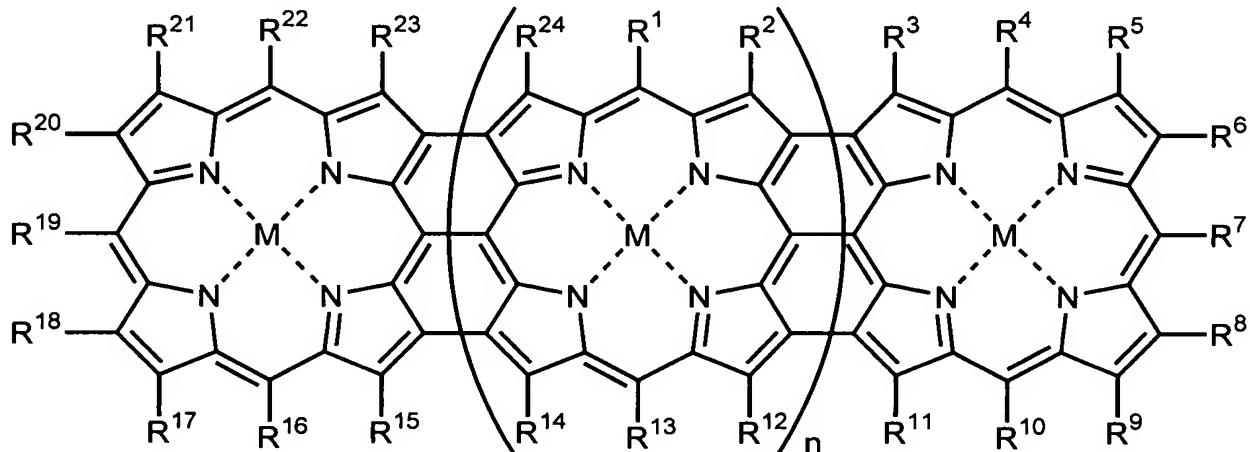
n is an integer not smaller than 1.

4. (Previously presented) A dye-sensitized type photoelectric conversion device comprising:

a semiconductor layer on which a sensitizing dye having an acidic group-containing porphyrin polymer expressed by a below-described general formula (4) as a skeleton of a base is carried; and

an electrolyte layer between counter electrodes; wherein:

general formula (4) is:



and wherein:

$R^1$  to  $R^{24}$  indicate hydrogen atoms or arbitrary substituents and may be the same or different;

at least one of  $R^1$  to  $R^{24}$  is an acidic substituent;

$M$  indicates a group of arbitrary kinds of metals; and

$n$  is an integer not smaller than 1.

5. (Previously presented) The dye-sensitized type photoelectric conversion device according to any one of the above claims wherein the acidic substituent is a carboxyl group, a sulfonic group, a hydroxyl group, or a 4-carboxyphenyl group.

6. (Previously presented) The dye-sensitized type photoelectric conversion device according to any one of the above claims wherein:

$R^1$  to  $R^{18}$  of the general formula (1) or (2) or  $R^1$  to  $R^{24}$  of the general formula (3) or (4) indicate substituents such as hydrogen atoms, halogen atoms, mercapto groups, amino groups, nitro groups, cyano groups, carboxyl groups, sulfonic groups, hydroxyl groups, substituted or non-substituted alkyl groups, substituted or non-substituted aryl groups, substituted or non-substituted alkoxy groups, substituted or non-substituted aryloxy groups, substituted or non-substituted alkylthio groups, substituted or non-substituted arylthio groups, substituted or non-substituted alkylamino groups, substituted or non-substituted arylamino groups, substituted or non-substituted carboxylic ester groups, substituted or non-substituted carboxylic amide groups, substituted or non-substituted sulfonic ester groups, substituted or non-substituted sulfonic amide groups, substituted or non-substituted carbonyl groups, substituted or non-substituted silyl groups, or substituted or non-substituted siloxy groups; and

at least one of  $R^1$  to  $R^{18}$  or at least one of  $R^1$  to  $R^{24}$  is an acidic substituent such as a carboxyl group, a sulfonic group, a hydroxyl group, or a 4-carboxyphenyl group.

7. (Original) The dye-sensitized type photoelectric conversion device according to claim 1 or 4, wherein the group of metals represented by  $M$  in the general formula (2) or (4) includes one kind or two or more kinds of metals selected from a group including Zn, Mg, Ca, Sr, Ba, Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Ti, Zr, Hf, V, Nb, Ta, Th, U, Cr, Mo, W, Mn, Tc, Re, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Cd, Hg, Al, Ga, In, Tl, Si, Ge, Sn,

Pb, As, Sb and Bi.

8. (Previously presented) The dye-sensitized type photoelectric conversion device according to any one of claims 1, 2, 3 or 4, wherein the semiconductor layer is comprised of an oxide semiconductor.

9. (Previously presented) The dye-sensitized type photoelectric conversion device according to any one of claims 1, 2, 3 or 4, wherein the semiconductor layer carries a sensitizing dye made of at least two kinds of an acidic group-containing porphyrin polymer expressed by general formula (1), (2), (3) or (4).

10. (Previously presented) The dye-sensitized type photoelectric conversion device according to any one of claims 1, 2, 3 or 4, wherein the semiconductor layer carries a sensitizing dye made of at least one kind of an acidic group-containing porphyrin polymer expressed by general formula (1), (2), (3) or (4) and other sensitizing dyes such as a ruthenium bipyridine complex, a chlorophyll derivative, or a zinc complex of porphyrin.

11. (Previously presented) The dye-sensitized type photoelectric conversion device according to any one of claims 1, 2, 3 or 4, wherein the semiconductor layer and the electrolyte layer are provided between a transparent base having a transparent conductive film and a conductive base serving as a counter electrode of the transparent base, and electric energy is generated between the transparent conductive film and the conductive base by a photoelectric conversion.

12. (Original) The dye-sensitized type photoelectric conversion device according to claim 11, wherein the dye-sensitized type photoelectric conversion device is a dye-sensitized type solar cell.